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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,247	05/09/2001	Michael T. Rossi	A7966	3007

7590

05/28/2003

SUGHRUE, MION, ZINN, MACPEAK & SEAS, PLLC
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Washington, DC 20037-3213

EXAMINER

PAK, SUNG H

ART UNIT PAPER NUMBER

2874

DATE MAILED: 05/28/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application N .	Applicant(s)	
	09/851,247	ROSSI ET AL.	
	Examiner	Art Unit	
	Sung H. Pak	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 January 2003 and 13 March 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24, 26-37 and 39-44 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24, 26-37 and 39-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 1/21/2003 has been entered. Claims 1-24, 26-37, 39-44 are now pending.

All pending claims have been carefully reconsidered in view of the entered amendment, however the claims are still unpatentable.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4, 6-7, 9-16, 18, 20-21, 23-24, 26-30, 32, 34-37, 39-40, 43-44 are rejected under 35 U.S.C. 102(e) as being anticipated by Risch et al (US 6,085,009).

Risch et al (US 6,085,009) had been cited in prior office actions.

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Regarding claim 1, Risch et al reference discloses an optical fiber with all the limitations set forth in the claims, including: an outer layer ("20" in Fig. 1); at least one optical fiber disposed inside the outer layer ("14" in Fig. 1); at least one gel-swellaible portion (a buffer tube) proximate to an inner surface of the outer layer ("12" in Fig. 1); a water resistant gel positioned adjacent to the gel-swellaible portion and disposed between the outer layer and the optical fiber (column 3 lines 4-7); the gel-swellaible buffer tube being composed of impact modified polypropylene (i-PP) (column 5 lines 29-51).

i-PP tubes typically have density less than 0.90 g/cc as shown by U.S. Patent No. 5,911,023, column 9, table 2 (relative density of i-PP) and therefore Risch et al ('009) inherently discloses a gel-swellaible buffer tube with density less than 0.90 g/cc. Also, Risch et al discloses a protective jacket of prior art stranded optical fiber cable (column 2 line 64- column 3 line 3). A prior art stranded optical fiber outer jacket is made of HDPE or MDPE as exemplified in U.S. Patent No. 5,911,023 (column 10 lines 32-33) and a typical density of HDPE is at least 0.90 g/cc, as shown in U.S. Patent No. 5,911,023 (column 9 table 2, relative density of HDPE). Therefore, Risch et al ('009) inherently discloses an optical fiber outer jacket with density of at least 0.90 g/cc. Since the density of i-PP buffer tubes are less than outer jacket, Risch et al inherently discloses gel-swellaible buffer tubes that are softer than the outer jackets.

Regarding claims 2, 6, 16, 20, 30, 34, Risch et al discloses that at least one gel-swellaible portion is a buffer tube that runs along the longitudinal length of the fiber cable (column 2 line 64-column 3 line 3, and column 5 lines 29-51).

Regarding claims 7, 21, 35, Risch et al discloses plurality of gel-swelling buffer tubes (Fig. 1).

Regarding claim 10, 24, 37, Risch et al discloses that the buffer tubes are copolymers of polyethylene (column 3 line 10).

Regarding claims 11, 15, 43, Risch et al discloses that i-PP buffer tubes swell more than 10% at 85°C in various water blocking gels (Fig. 2).

Regarding claims 12, 13, 26, 27, 39, 40, Risch et al discloses that the water blocking gel is polyolefin oil based gel (Fig. 2).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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Claims 3, 5, 8, 17, 19, 22, 31, 33, 41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Risch et al (US 6,085,0009).

Risch et al reference discloses an optical fiber with all the limitations set forth in the claims as discussed above, except it does not explicitly state that the buffer tubes may have grooves or be corrugated. However, it would have been an obvious matter of design choice to have grooves on the buffer tubes, since applicant has not disclosed that grooves on the buffer tube solves any state problem or is for any particular purpose (see page 10 of the instant application) and it appears that the invention would perform equally well without the grooved buffer tubes.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Risch et al device to have grooved buffer tubes.

Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Risch et al (US 6,085,009).

Risch et al reference discloses an optical fiber cable with all the limitations set forth in the claims as discussed above, except it does not disclose the use of optical fiber ribbons. However, optical fiber ribbons are well known and commonly used in the art. Fiber ribbons provide a well-known advantage over the individual fibers, because they allow for plurality of optical fibers to be organized in a smaller given space.

Therefore, it would have been obvious to a person of ordinary skill in the art at the time

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the invention was made to modify Risch et al devices to use fiber ribbons instead of individual fibers. It would have been desirable to have dense fiber optic cables.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sung H. Pak whose telephone number is (703) 308-4880. The examiner can normally be reached on Monday - Thursday : 6:30am-5:00pm.

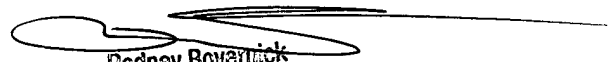
The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7724 for regular communications and (703) 308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



sp
May 20, 2003

Sung H. Pak
Examiner
Art Unit 2874



Rodney Boverick
Supervisory Patent Examiner
Technology Center 2800